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ABSTRACT

The study of typical gender development suggests that both approach and avoidance mechanisms are involved in the eventual display of sex-typed behavior. Some experiments have attempted to demonstrate the independent contribution of these two parameters. Studies suggest that avoidance behavior for cross-sex toys is a useful index of sex-role acquisition and can be studied independently of approach behavior toward same-sex toys. This study attempted to clarify the independent contributions of approach and avoidance behavior toward sex-typed toys in the play behavior of children with gender identity disorder and in controls. Subjects were psychiatric controls, normal boys and girls, and 9 boys and 3 girls fully or partially meeting criteria for gender identity disorder. The three choice situations presented involved same-sex and cross-sex toys, same-sex and neutral toys, and cross-sex and neutral toys. Findings indicated that the gender disordered group played more with the cross-sex toys and less with the same-sex toys than did the controls, regardless of the types of alternative toys available. Findings were interpreted as providing general support for the notion that children with gender identity disorder show atypical patterns of both approach and avoidance behaviors toward sex-typed toys. (RH)

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Effects of Neutral Toys on Sex-Typed Play in Children with Gender Identity Disorder

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ABSTRACT

This study assessed the potentially independent influences of approach and avoidance behaviors toward same-sex and cross-sex toys in the sex-typed play of children with gender identity disorder and in normal boys, normal girls, and psychiatric controls. Three choice situations were presented that included same-sex and cross-sex toys, same-sex and neutral toys, and cross-sex and neutral toys. The results showed that the gender disordered group played more with the cross-sex toys and less with the same-sex toys than the controls (particularly the normal boys and psychiatric controls), regardless of the types of alternative toy available (sex-typed or neutral). These findings were interpreted as providing general support for the notion that children with gender identity disorder show atypical patterns of both approach and avoidance behaviors toward sex-typed toys.

Effects of Neutral Toys on Sex-typed Play in Children with Gender Identity Disorder

Children who meet the DSM-III-R criteria for Gender Identity Disorder (American Psychiatric Association, 1987) show at least two interrelated deviations in their gender development: first, they verbalize a strong desire to be of the opposite sex; second, they engage in a variety of cross-gender-role behaviors, such as extensive play with toys and clothing culturally associated with the opposite sex. These behavioral patterns can remain quite stable during childhood (e.g., Zucker, Bradley, Doering, & Lozinski, 1985) and, in some cases, are associated with adolescent and adult transsexualism (Zucker, 1985). As judged by prospective studies, however, the most common long-term outcome of the gender identity disorder of childhood is homosexuality (Green, 1987).

The intensity with which these children immerse themselves in overt cross-gender play is usually the basis for identification and clinical referral. The developmental literature suggests that sex-typed play preferences typically emerge some time between the second and third year of life (e.g., Fagot, Leinbach, & Hagan, 1986; Fein, Johnson, Kosson, Stork, & Wasserman, 1975; O'Brien & Huston, 1985; Zucker, Bradley, Corter, Doering, & Finegan, 1980), perhaps following the ability to discriminate males from females (Leinbach & Fagot, 1986). This age period also appears to be the modal time in which certain cross-gender behaviors are first observed by parents of children subsequently diagnosed with gender identity disorder (e.g.,

Green, 1976), suggesting that the underlying processes may be similar, albeit inverted (cf. Cicchetti, 1984).

The study of typical gender development suggests that both approach and avoidance mechanisms are involved in the eventual display of sex-typed behavior (e.g., Muller & Goldberg, 1980), and some experiments have attempted to demonstrate the independent contribution of these two parameters. Hartup, Moore, and Sager (1963), for example, studied the avoidance aspects of sex role acquisition by deliberately confounding toy attractiveness and gender appropriateness. Children in nursery and elementary school were exposed simultaneously to attractive cross-sex toys and to a smaller number of unattractive neutral toys selected for their limited play potential. For both sexes, but with more uniformity among boys, avoidance of cross-sex toys was greater among elementary school children than among nursery school children. Similar findings have been reported by Ross and Ross (1972) and by Viera and Miller (1978). These studies suggest that avoidance behavior for cross-sex toys is a useful index of sex-role acquisition and can be studied independently of approach behavior toward same-sex toys.

Previous studies of sex-typed play in cross-gender-identified children have assessed their behavior in a forced-choice situation pairing masculine and feminine toys (e.g., Green, Fuller, Rutley, & Hendler, 1972; Rekers & Yates, 1976; Zucker, Doering, Bradley, & Finegan, 1982). As would be expected, cross-gender-identified children have been found

to play less with same-sex toys and more with cross-sex toys than controls. Although this technique has value in the assessment of gender identity disorder, it has some interpretive limitations. For example, exclusive play with cross-sex toys in a forced-choice situation could reflect approach behavior toward these toys, avoidance of the same-sex toys, or a combination of both influences. Apart from the conceptual issue involved, understanding the basis of a child's preference for cross-sex play also has treatment implications, particularly for those clinicians who directly attempt to modify the child's play behavior (e.g., Rekers, 1977). For example, a child who prefers cross-sex toys and dislikes same-sex toys would probably require a more complex intervention than a child who plays with cross-sex toys simply because of a dislike of same-sex toys.

The present study attempted to clarify the independent contributions of approach and avoidance behavior toward sex-typed toys in the play behavior of children with gender identity disorder and in controls. Three types of play situations were presented: same-sex and cross-sex toys, same-sex and non-sex-typed (neutral) toys, and neutral and cross-sex toys. For the same-sex vs. cross-sex toy choice situation, it was expected that the gender disordered children would play more with cross-sex toys and less with same-sex toys than controls, as has been found in previous studies (e.g., Green et al., 1972; Rekers & Yates, 1976). In the same-sex vs. neutral toy situation, it was predicted that the gender disordered children would play less

with the same-sex toys and more with the neutral toys than the controls. Such an effect would suggest that the avoidance of same-sex toys is independent of the presumed attraction to cross-sex toys. In the final situation pairing neutral and cross-sex toys, it was expected that the gender disordered children would play more with cross-sex toys and less with neutral toys than the controls. Such a finding would provide evidence that attraction to the cross-sex toys is independent of the presumed avoidance of same-sex toys.

METHOD

Subjects

During the time frame of the study, 17 children were referred by either their parents or at the suggestion of a professional (e.g., teacher, pediatrician) to a specialized clinic for evaluation of potential gender identity problems. Of these, 12 children (9 boys, 3 girls) were included in the study. The nine boys all met the DSM-III criteria for Gender Identity Disorder of Childhood (American Psychiatric Association, 1980). The three girls met the Point A criterion ("strongly and persistently stated desire to be a boy, or insistence that she is a boy") but not the Point B criterion (statements that would deny the reality, or future reality, of sexual anatomic status). Elsewhere, problems with the Point B criteria for girls have been discussed (Zucker, 1982); all three girls would, however, meet the revised Point B criteria in DSM-III-R ("persistent marked aversion to normative feminine clothing and insistence on wearing

stereotypical masculine clothing" and/or negative remarks or behaviors regarding female anatomic structures) (American Psychiatric Association, 1987). The remaining five children, all boys, had some characteristics of cross-gender-identification, but did not meet the complete DSM-III criteria, and thus were not included in the present study. Similarities and differences between gender-referred children who meet the DSM-III criteria and those who do not have been reported elsewhere (Zucker, Finegan, Doering, & Bradley, 1984). At referral, a majority of the 12 participating children were reported by their parents to also have other behavioral problems. On the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983), for example, 5 of the children had at least one elevated narrow-band subscale ($T \geq 70$; range, 1-3) and 6 children had total behavior problem scores in the clinical range ($\geq$ 90th percentile), even after all items related to cross-gender-identification were removed.

There were three comparison groups: psychiatric controls, normal boys, and normal girls. All controls were paid $30 for their participation. A psychiatric control group was included to determine whether psychiatric status per se influenced sex-typed toy preferences. This group consisted of 13 boys and 2 girls who were referred to the same children's unit for a variety of psychiatric and behavioral problems. The parents of one potential psychiatric control chose not to grant permission for him to participate in the study. On the CBCL, 9 of the psychiatric controls had at least one elevated narrow-band

subscale (range, 1-8) and 10 had total behavior problem scores in the clinical range. The proportion of gender-referred and psychiatric controls with at least one narrow-band elevation and total behavior problem scores in the clinical range did not differ from each other as judged by a Fisher's test. The chart diagnoses of the psychiatric controls were as follows: reactive disorder (5), learning disability (3), withdrawing reaction (1), anxious personality (1), anxiety reaction (1), personality disorder (1), developmental deviation in social development (1), learning disability and encopresis (1), and personality disorder, schizoid type (1).

The normal boys (N=15) and normal girls (N=15) were recruited from daycare centers or from an advertisement in a community newspaper. Seven other children considered for the normal groups were excluded on the basis of at least one narrow-band elevation on the CBCL or previous referral for mental health services.

Free Play Task

The free play task was a modification of one utilized in previous studies, which involved providing the child with a choice between stereotypically masculine and feminine toys or dress-up apparel (Cole, Zucker, & Bradley, 1982; Rekers & Yates, 1976; Zucker et al., 1982, 1985). In the present study, the procedure was modified by including additional trials in which the child could choose between masculine and neutral or between feminine and neutral stimuli. The masculine and feminine toys

and dress-up apparel (e.g., Barbie doll, dart gun, long-dress, army shirt) were the same as those used in Zucker et al. (1982) and have been shown to be sex-stereotyped in various studies conducted between 1950 and the late 1980s. The neutral stimuli were chosen on the basis of a study with 40 boys and girls between the ages of four and seven (M age = 4.8 years) attending daycare centers. Stimuli retained were those recognized by both boys and girls as equally appropriate for both sexes. The neutral toys consisted of an etch-a-sketch, a clarinet, a guitar, and two animal puppets and dress-up apparel consisted of a bear mask, tragedy and comedy masks, a sombrero, and a stethoscope. A more detailed explanation of the selection criteria may be found elsewhere (Doering, 1981).

The play situation took place in a 4.3 m x 3.2 m carpeted room containing a couch, a low table, and six wooden boxes (0.4 m x 0.6 m x 0.3 m) covered with lids and located in the center of the room. A one-way observation window and microphone permitted video and audio recording from an adjacent room. One set of toys or dress-up apparel as described above was in each box. The child was escorted into the room by a male tester and was informed that he or she could play with any of the things in the open boxes while the tester did some work behind the mirror. There were six five-minute trials. Two boxes were presented for each trial, pairing two categories of toys or dress-up apparel. The types of trials were: (1) same- vs. cross-sex toys or dress-up apparel; (2) same-sex vs. neutral toys or dress-up apparel;

and (3) neutral vs. cross-sex toys or dress-up apparel. A toy trial was always followed by a dress-up trial presenting the same type of choice, providing 12 possible orders of administration which were assigned consecutively to the children in each group.

The dependent measure was the duration of manual and/or physical contact with the stimuli from each gender-typed category, scored from videotape with an event recorder. Contact with toys or dress-up apparel was not scored if the object was used for cross-sex purposes (e.g., a boy pretending to shave his legs with a razor). This was rare, occurring on only three of 342 trials. Mixed play, defined as simultaneous contact with both types of toys or dress-up apparel on a trial, was also excluded. This also occurred infrequently (less than 5% of total play) and will not be discussed further. Two coders independently scored the videotapes, and one was blind to group status. Agreement computed separately for each child on each measure ranged from 89.7% to 100% (mean, 95.3%).

RESULTS

Table I presents the demographic data for the four groups. One-way analyses of variance (ANOVA) revealed no significant effects for age ($F[3,53] = 1.03$), IQ ($F[3,53] = 1.08$), and social class ($F[3,53] = 0.98$). A chi-square test revealed no significant effect for parent's marital status ($X2[3] = 1.65$).

Correlations were computed for the association between the demographic variables (age, IQ, social class, and marital status)

and the duration of play with same-sex, cross-sex, and neutral toys in each of the three choice situations (i.e., same-sex vs. cross-sex; same-sex vs. neutral; cross-sex vs. neutral). Across the four groups, none of the 24 correlations were significant at the .05 level (two-tailed). When the groups were analyzed separately, 4 of 96 correlations were significant: among the normal boys, IQ was positively correlated with duration of same-sex play (r = .59, p = .02) and negatively correlated with duration of cross-sex play (r = -.69, p= .004) in the same-sex vs. cross-sex choice situation; among the normal girls, IQ was negatively correlated with duration of neutral play (r= -.53, p = .04) in the neutral vs. cross-sex choice situation; and among the psychiatric controls, social class was negatively correlated with duration of neutral play when neutral toys were paired with cross-sex toys (r = -.54, p = .036). It appears, therefore, that the demographic variables did not exert a strong influence on the play patterns of the four groups of children.

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insert Table I about here

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The mean duration of seconds spent playing with the two types of toys as a function of group for each of the three choice situations is presented in Table II. For each choice situation, a 4 (group) x 2 (toy type: same-sex vs. cross-sex, same-sex vs. neutral, or neutral vs. cross-sex) x 2 (stimulus type: toys vs. dress-up apparel) ANOVA was performed. These analyses yielded

main effects for stimulus type for all three choice situations (all ps < .01), which indicated that there was more play with toys than with dress-up apparel; however, there were no higher-order interactions involving group and/or toy type. Accordingly, all subsequent analyses were collapsed across stimulus type. For ease of presentation, toys and dress-up apparel will henceforth be referred to as toys.

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insert Table II about here

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Same-sex vs. Cross-sex Toys

The group x toy-type interaction was significant ($F[3,53] = 12.7$, $p < .0001$). Simple effects analysis (Kirk, 1968) showed that both the normal boys and psychiatric controls played significantly longer with the same-sex toys than with the cross-sex toys (both ps < .0001). Although the mean differences were in the expected direction, there was no difference in same-sex vs. cross-sex play in the gender-disordered group ($F = 1.63$) and in the group of normal girls ($F = 1.67$).

There were simple main effects for group for both same-sex and cross-sex play (both ps < .0001). Duncan's multiple range test for unequal ns (Kramer, 1956) showed that the gender-disordered group played significantly longer with the cross-sex toys and significantly shorter with the same-sex toys than either the normal boys or the psychiatric controls (all ps < .01), but not from that of the normal girls. The normal girls played

significantly longer with cross-sex toys than the normal boys ($p < .05$).

Same-sex vs. Neutral Toys

The group x toy-type interaction was significant ($F[3,53] = 3.1$, $p < .05$). Simple effects analysis showed that only the psychiatric controls played significantly longer with the same-sex toys than with the neutral toys ($p < .01$); the other three groups did not show differential times playing with the two types of toys (all Fs < 2.3).

There were simple main effects for group for both same-sex and neutral play (both ps $< .05$); however, none of the post-hoc comparisons between pairs of groups were significant at the .05 level, although the gender-disordered group did have less same-sex play than the combined controls ($p < .05$). It can be seen in Table II that the gender-disordered group played the longest with the neutral toys and the shortest with the same-sex toys.

Cross-sex vs. Neutral Toys

The group x toy type interaction was significant ($F[3,53] = 3.5$, $p < .05$). Simple effects analysis showed that both the normal boys and psychiatric controls played significantly longer with the neutral toys than with the cross-sex toys (both ps $< .0001$), but there was no difference in neutral play vs. cross-sex play in the gender-disordered group ($F < 1$) and in the group of normal girls ($F = 2.3$).

Simple main effects for group were found for both neutral

and cross-sex play (both ps < .05); however, none of the post-hoc comparisons between pairs of groups were significant, although the gender-disordered children played more with the cross-sex toys than the combined controls ($p < .05$). Again, it can be seen in Table II that the gender-disordered children played the longest with the cross-sex toys and the shortest with the neutral toys.

Sex-typed and Neutral Play as a Function of the Alternative Toys Available

In addition to the above analyses, t-tests were used to assess whether the duration of play with same-sex toys, cross-sex toys, and neutral toys differed as a function of the alternative toys available. For same-sex play, the normal boys played less with these toys when neutral toys were available as opposed to cross-sex toys ($t[14] = 4.0$, $p < .001$). There were no significant changes in same-sex play for the other three groups as a function of the alternative toys available (all ts < 1). For cross-sex play, there were no significant changes in duration of play as a function of the alternative toys available for any of the groups. For neutral play, however, the normal boys and psychiatric controls played longer with these toys when cross-sex toys were available as opposed to same-sex toys (both ps < .001) and a similar trend was found for the normal girls, $t[14] = 2.0$, $p = .069$. There were no changes in play with the neutral toys as a function of the alternative toys available for the gender-disordered group ($t < 1$).

Inspection of Table II suggests that the play behavior of the gender disturbed group and the normal girls had more of a bimodal distribution than that of the normal boys and psychiatric controls. The bimodal distribution could be the result of the children playing with each of the two types of toys for similar lengths of time, or the result of some children playing primarily with one type of toy, and other children playing primarily with the other type of toy. The latter pattern appeared to best account for the play behavior of individuals on all of the trials. Using the criterion of spending at least 70% of actual play time with one of the two types of toys, 84.5% of the trials (289 of 342) were characterized by this type of preferential play. The proportion of trials in each of the four groups that was characterized by this type of preferential play was similar (range, 80%-88%).

DISCUSSION

The aim of the present study was to assess the potentially independent influences of approach and avoidance behaviors toward same-sex and cross-sex toys in gender disordered children and in controls. This was achieved by including trials in which same-sex and cross-sex stimuli (toys or dress-up apparel) were each paired on two occasions with neutral stimuli. From the standpoint of replication, two trials were also included that paired same-sex and cross-sex stimuli.

The results of the same-sex/cross-sex trials were reasonably consistent with previous studies (e.g., Rekers & Yates, 1976) in

that the gender disordered children played longer with cross-sex toys and less with same-sex toys than the normal boys and the psychiatric controls. The play patterns of the gender disordered group did not, however, differ significantly from the normal girls, although they were in the expected direction.

Within groups analyses showed that although the gender disordered group played longer with the cross-sex toys than with the same-sex toys, the difference was not significant. The ratio of cross-sex to same-sex play was, however, reasonably consistent with Rekers and Yates' (1976) data and with our own data on a larger sample of gender-referred children with a DSM-III diagnosis of Gender Identity Disorder (Zucker et al., 1984).

Among the control groups, both the normal boys and psychiatric controls significantly preferred the same-sex toys over the cross-sex toys. This difference was not significant for the normal girls, although their play patterns were in the expected direction. That girls show less extreme patterns of sex-typed play has been a common, though not universal, finding in the normative literature (e.g., Brown, 1956; Connor & Serbin, 1977; Edelbrock & Sugawara, 1978; Schau, Kahn, Diepold, & Cherry, 1980); overall, it is typically found that girls prefer same-sex stimuli over cross-sex stimuli, but not to the same extent as do boys. Our data would seem consistent with this general pattern; however, it should be noted that neither Rekers and Yates (1976) nor Cole et al. (1982) found sex differences in the amount of same-sex play in their samples of normal boys and girls. Since

our normal boys were similarly sex-typed, there is no simple explanation as to why the normal girls were less sex-typed than what has been previously reported with this task. In any case, the difference appears to be more a matter of degree than of kind.

The results for the same-sex/neutral toy trials provided partial support for our hypotheses: the gender disordered group played less with the same-sex toys than the controls, although the dif..ence was significant only when the data were combined across the three control groups. The gender disordered children also played longer with the neutral toys than the controls but not at a conventional level of significance. Overall, then, the pattern suggests that gender disordered children avoid same-sex toys, even when the presumably more attractive cross-sex toys are not available.

Compared to the same-sex/cross-sex trials, it was predicted that the amount of same-sex play would be reduced among the controls, given that the neutral toys were expected to also serve as approach stimuli. A reduction in same-sex play was particularly apparent for the normal boys, who did not show a significant difference in their amount of same-sex and neutral play. This finding is consistent with Dickstein and Seymour's (1977) observation that adding neutral items to Brown's (1956) IT Scale for Children, a "projective" test, lowered boys' masculine scores relative to the test's standard version in which only masculine and feminine choices are available. The psychiatric

controls, however, played significantly longer with the same-sex toys than the neutral toys, although they did show some reduction in their amount of same-sex play. There was no a priori reason to expect this difference between the normal boys and the psychiatric controls, given that the neutral toys had been judged by both boys and girls as appropriate for children of their own gender to play with. Like the normal boys, the normal girls also did not show a significant preference for the same-sex toys over the neutral toys, but interpretation of their behavior on these trials cannot be the same as the boys' since the girls also did not significantly prefer the same-sex toys over the cross-sex toys. Inspection of Table II shows that all three control groups played longer with the same-sex toys than with the neutral toys (although the difference was only significant for the psychiatric controls) whereas the reverse occurred for the gender disordered group. Given the pattern of play in the control groups, it may be the case that same-sex-typed toys have more of an interest value than the neutral toys. Alternatively, it could be that the specific sex-typed toys that were used had greater play potential than the neutral toys, although this did not seem readily obvious (e.g., number of movable parts, etc.).

On the neutral/cross-sex toy trials, the normal boys and psychiatric controls both played significantly longer with the neutral toys than with the cross-sex toys, whereas the gender disordered children and the normal girls did not show differential times playing with these two types of toys.

Avoidance of the cross-sex toys was clearly evident in the normal boys and psychiatric controls, given that both groups showed significant increases in neutral play compared to the trials in which same-sex toys were paired with the neutral toys. A similar trend was found for the normal girls. In contrast, there was not a significant change in the amount of neutral play for the gender disordered group. This last finding would suggest that gender disordered children do, in fact, show higher levels of approach behavior toward cross-sex toys, even when the presumably less attractive same-sex toys are not present.

There was considerable variability in the sex-typed and neutral play of the gender disordered group. For example, six of the children spent at least 70% of their actual play time with the cross-sex toys on two or more of the four trials that included cross-sex stimuli, while four subjects had low levels as judged by no more than one trial of cross-sex play above 30% of actual play time. A question of clinical interest is whether such individual variation has diagnostic significance. The bimodal distribution, as illustrated above, did not appear to correspond to any clinical or demographic differences, suggesting that those individuals with low levels of cross-sex play may have been examples of false negatives rather than true negatives in terms of the sensitivity of the procedure as a diagnostic test. In general, false negatives have been shown to be the most common type of "problem" on various psychological tests in the assessment of gender disturbed children (see, e.g., Rekers &

Yates, 1976; Zucker, Finegan, Doering, & Bradley, 1983).

Among the six gender disordered children with high levels of cross-sex play, there was some evidence for individual variation in this behavior as a function of the alternative toys available. Three of the children had equal amounts of cross-sex play across the two types of alternative toys available, but two other children had high levels of cross-sex play only when the alternative toys were same-sex. If such patterns reflect true differences between individuals, rather than random error, it would suggest that gender disordered children vary in the degree to which they prefer cross-sex stimuli and eschew same-sex stimuli. This may be of etiological significance, as well as having relevance in designing clinical management strategies for the modification of sex-typed play and behavior.

REFERENCES

Achenbach, T. M., & Edelbrock, C. (1983). Manual for the Child Behavior Checklist and Revised Child Behavior Profile. Burlington, VT: University Associates in Psychiatry.

American Psychiatric Association (1980). Diagnostic and statistical manual of mental disorders (third edition). Washington, D.C.: American Psychiatric Association.

American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (third edition, revised). Washington, D.C.: American Psychiatric Association.

Brown, D. G. (1956). Sex-role preference in young children. Psychological Monographs, 70, (14, Whole No. 421).

Cicchetti, D. (1984). The emergence of developmental psychopathology. Child Development, 55, 1-7.

Cole, H. J., Zucker, K. J., & Bradley, S. J. (1982). Patterns of gender role behavior in children attending traditional and non-traditional day-care centers. Canadian Journal of Psychiatry, 27, 135-139.

Connor, J. M., & Serbin, L. A. (1977). Behaviorally-based masculine and feminine activity preference scales for children: Correlates with other classroom behaviors and cognitive tests. Child Development, 48, 1411-1416.

Dickstein, E. B., & Seymour, M. W. (1977). Effect of the addition of neutral items on IT Scale scores. Developmental Psychology, 13, 79-80.

Doering, R. W. (1981). Parental reinforcement of gender-typed behaviors in boys with atypical gender identity. Unpublished doctoral dissertation, University of Toronto.

Edelbrock, C., & Sugawara, A. I. (1978). Acquisition of sex-typed preferences in preschool-aged children. Developmental Psychology, 14, 614-623.

Fagot, B. I., Leinbach, M. D., & Hagan, R. (1986). Gender labeling and the adoption of sex-typed behaviors. Developmental Psychology, 22, 440-443.

Fein, G., Johnson, D., Kosson, N., Stork, L., & Wasserman, L. (1975). Sex stereotypes and preferences in the toy choices of 20-month-old boys and girls. Developmental Psychology, 11, 527-528.

Green, R. (1976). One hundred ten feminine and masculine boys: Behavioral contrasts and demographic similarities. Archives of Sexual Behavior, 5, 425-446.

Green, R. (1987). The "sissy boy syndrome" and the development of homosexuality. New Haven, CT: Yale University Press.

Green, R., Fuller, M., Rutley, B. R., & Hendler, J. (1972). Playroom toy preferences of fifteen masculine and fifteen feminine boys. Behavior Therapy, 3, 425-429.

Hartup, W. W., Moore, S. G., & Sager, G. (1963). Avoidance of inappropriate sex typing by young children. Journal of Consulting Psychology, 27, 467-473.

Hollingshead, A. B. (1975). Unpublished manuscript. (Available from Department of Sociology, Yale University, New Haven,

CT).

Kirk, R. E. (1968). Experimental design: Procedures for the behavioral sciences. Belmont, CA: Brooks/Cole.

Kramer, C. Y. (1956). Extensions of multiple range tests to group means with unequal numbers of replications. Biometrics, 12, 307-310.

Leinbach, M. D., & Fagot, B. I. (1986). Acquisition of gender labeling: A test for toddlers. Sex Roles, 15, 655-666.

Muller, R., & Goldberg, S. (1980). Why William doesn't want a doll: Preschoolers' expectations of adult behavior toward girls and boys. Merrill-Palmer Quarterly, 26, 259-269.

O'Brien, M., & Huston, A. C. (1985). Development of sex-typed play in toddlers. Developmental Psychology, 21, 866-871.

Rekers, G. A. (1977). Assessment and treatment of childhood gender problems. In B. B. Lahey & A. E. Kazdin (Eds.), Advances in clinical child psychology, Vol. 1 (pp. 267-306). New York: Plenum Press.

Ross, D. M., & Ross, S. A. (1972). Resistance by preschool boys to sex-inappropriate behavior. Journal of Educational Psychology, 63, 342-346.

Schau, C. G., Kahn, L., Diepold, J. H., & Cherry, F. (1980). The relationships of parental expectations and preschool children's verbal sex typing to their sex-typed toy play behavior. Child Development, 51, 266-270.

Viera, K. G., & Miller, W. H. (1978). Avoidance of sex-atypical toys by five- and ten-year old children. Psychological

Reports, 43, 543-546.

Zucker, K. J. (1982). Childhood gender disturbance: Diagnostic issues. Journal of the American Academy of Child Psychiatry, 21, 274-280.

Zucker, K. J. (1985). Cross-gender-identified children. In B. W. Steiner (Ed.), Gender dysphoria: Development, research, management (pp. 75-174). New York: Plenum Press.

Zucker, K. J., Bradley, S. J., Corter, C. M., Doering, R. W., & Finegan, J. K. (1980). Cross-gender behaviour in very young boys: A normative study. In J. Sampson (Ed.), Childhood and sexuality (pp. 599-622). Montreal: Editions Etudes Vivantes.

Zucker, K. J., Bradley, S. J., Doering, R. W., & Lozinski, J. A. (1985). Sex-typed behavior in cross-gender-identified children: Stability and change at one-year follow-up. Journal of the American Academy of Child Psychiatry, 24, 710-719.

Zucker, K. J., Doering, R. W., Bradley, S. J., & Finegan, J. K. (1982). Sex-typed play in gender-disturbed children: A comparison to sibling and psychiatric controls. Archives of Sexual Behavior, 11, 309-321.

Zucker, K. J., Finegan, J. K., Doering, R. W., & Bradley, S. J. (1983). Human figure drawings of gender-problem children: A comparison to sibling, psychiatric, and normal controls. Journal of Abnormal Child Psychology, 11, 287-298.

Zucker, K. J., Finegan, J. K., Doering, R. W., & Bradley, S. J.

(1984). Two subgroups of gender-problem children. Archives of Sexual Behavior, 13, 27-39.

TABLE I. Sample Characteristics

Variables		Group: Gender Identity Disorder (n=12)	Normal Girls (n=15)	Normal Boys (n=15)	Psychiatric Controls (n=15)
Age (in years)	M	6.5	7.2	7.3	7.6
	SD	0.9	1.7	1.6	1.7
IQ	M	107.7	113.6	115.9	113.7
	SD	12.3	10.8	12.4	12.7
Social class	M	44.3	46.3	44.6	38.4
	SD	11.3	9.2	14.1	16.9
Marital status					
Mother only	N	2	5	3	5
Both parents	N	10	10	12	10

Note. IQ was assessed by the WISC-R or WPPSI for the gender disordered group and psychiatric controls and by the Peabody Picture Vocabulary test for the normal boys and girls. Social class was based on Hollingshead's (1975) Four Factor Index of Social Status (absolute range, 8-66).

TABLE II. Duration of Play (in seconds)

Choice Situation		Group: Gender Identity Disorder (n=12)	Normal Girls (n=15)	Normal Boys (n=15)	Psychiatric Controls (n=15)
		Same-sex vs. Cross-sex Toys			
Same-sex Play	M	94.0	145.2	260.1	213.2
	SD	97.8	109.6	67.7	111.9
Cross-sex Play	M	145.8	98.4	7.2	35.9
	SD	116.4	101.3	21.5	90.4
		Same-sex vs. Neutral Toys			
Same-sex Play	M	82.8	153.4	157.0	181.7
	SD	97.5	112.7	99.1	113.8
Neutral Play	M	153.8	93.3	103.7	62.5
	SD	96.7	113.8	103.4	99.9
		Neutral vs. Cross-sex Toys			
Neutral Play	M	145.1	157.8	223.6	228.5
	SD	116.4	99.9	92.1	101.7
Cross-sex Play	M	117.0	94.8	37.4	44.6
	SD	118.7	98.5	70.1	79.2

Note. Maximum seconds of play in each situation is 300.